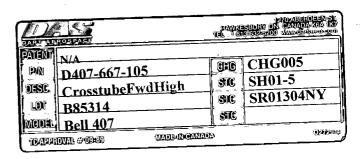
| Work Orde Friday, August 17 | r ID 89021 7, 2012 2:34:28 PM | | *890 | 121* | | | | | Page 1 |
|---------------------------------------|---|---|----------------------|--------------------------|---------------------|---------------|--------------------|------------------|----------------|
| Revision ID: | D407-667-105 Crosstube Fwd | | Accept | *N900 | 040100 | ገ* ፡ | Setup Star Stop | I NI | S1* S2* |
| Required Date: 8 | 8/17/2012 Start Qty: 1.4 8/24/2012 Req'd Qty: 1.4 NCR 12-1695 | • | | Cust Item l Customer: | ID: | | | | () / |
| | Process Plan: M | • | _ | | ate: | 4 | Run Star Stop | 171 | R1* R2* |
| equence ID/ Vork Center ID | Operation Description | | Set Up/ Run Hours | Tool ID | Tool # Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
| Draw Nbr D407-667-145 DS19565 | Revision Nbr Rev C (DEO) A | | | | | | | | |
| 700* Crosstubes | Memo | , | 0.00 | | • | Al | 12 - | 8-21 | |
| rosstubes | PULL | FROM STOCK D407-667-105 X MBLE DSI 9544-017 ON X-TUBE IRE ASSY IS COMPLETE d206-6 | 3 | -1695 & ECN | 12-631 | | | | |
| 。 :300* | QC5- Inspect part c | ompleteness to step on W/O | 0.00 | | | | | | |
| QC Quality Control | Memo | | 0.00 | | | 1 | | | MI 19.08 |



| NCR: | Yes / | No | | | | WORK ORDER NON- | COI | NFORM | MANCE / UPDATE | : | | | | |
|---------------|------------|-----------|-----------|------------|----------------|--|----------|------------|------------------------------|---|---------------|--|-----|--|
| | | | | | | | | | | | QA Closed: | Da | te: | |
| Work Orde | er: | | | | | DISPOSITION | | | AC | GAINST DE | PARTMENT | /PROCESS | | |
| Part N | | | | | | Rework Scrap Use-as-is Work Order Update | | f Therm | Machining Sm noforming Fi | osstube nall Fab nishing nposite | ł | Water Jet d. Eng. Coor. re/Packaging Supplier | | Engineering Quality Other |
| Root | | | | | Descri | ption of work order update | | Initial | Action | - | Sign & | | | |
| Cause | | ate | Step | Qty | C | or Non-conformance | Cr | nief Eng | Description |) | Date | Verificatio | n | QC Inspector |
| Doc/Data | | | | | | | | | | | | | | |
| Equip/Tooling | | | | | | | | | | | | : | | |
| Operator | | İ | | | | | | | | | | | | |
| Material | | | | | | | ļ | | | | | | 1 | |
| Setup | | | | | • | | | | | | | | İ | |
| Other | | | | | | | | | | | | | | |
| Process | _ | | | | | | | | | | | | | |
| Supplier | _ | | | | | | | | | | | | | |
| Training | | | | | | | | | | | · | | | |
| Unapproved | | | | | | | <u>L</u> | | | | | | | ·- · · · · · · · · · · · · · · · · · · |
| | | | | | | | AUL | T CATE | GORY | | | | | |
| Landir r | ng Gear | | | | <u>-</u> | General | | 1 | | | 1 | | | |
| | _ | ding | _ | | | Bend | <u></u> | Grain | | ├ | Ovalized | | _ | Pressure/Forced |
| ` } | | | t Concer | itric to (| ^{D/S} | BOM/Route | <u> </u> | Hardwa | | <u> </u> | Over/Under | | _ | Temperature/Cure |
| - | Cra | | | | | Broken/Damaged | <u> </u> | 1 | on Incomplete | | Part Incorred | | - | Weld |
| - | _ | | rimped. | | | Burrs | - | 1 | ons Incomplete/Unclear | | Part Lost/Mi | ssing | Ш' | Wrong Stock Pulled |
| | Cuf | | | | <u> </u> | Contamination | - | Mainte | | | Part Moved | | | |
| | — — | t Treat | | | <u> </u> | Countersink | <u></u> | Mislabe | | | Positioned V | - | | 211 |
| | | | Strip in | Tube | | Cut Too Short | - | Misread | | | Power Loss/ | Surge | Щ | Other |
| - | ⊣ ∵ | oles in E | | | _ | Drill Holes | <u> </u> | Offset | | | | | | |
| 1 | Tore | que Wa | ives in E | xtrusion | ו | Drawing | 1 | Out of C | alibration | | | | | |

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

Work Order ID 89021

OC

Quality Control

89021

Page 2

Friday, August 17, 2012 2:34:28 PM

Item ID: D407-667-105 Accept *N900040100* Setup Start **Revision ID:** Item Name: Crosstube Fwd Start Date: 8/17/2012 Start Qty: 1.00 **Cust Item ID:** Req'd Qty: 1.00 **Required Date: 8/24/2012 Customer:** Reference: NCR 12-1695 Run Start Process Plan: Approvals: Date: Tooling: Date: Stop Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject Work Center ID Description **Run Hours** Code Qty Oty Number Stamp Identify as per dwg & Stock Location: \$3 310 0.00 *310* Packaging 0.00 Memo Packaging ID AND STOCK UNDER NEW BATCH NUMBER AT CHG 005 320 QC21- Final Inspection - Work Order Release 0.00

0.00

Memo

M 08/37

| | | | DQA: | Date: | |
|------|----------|-------------------------------------|------------|-------|--|
| NCR: | Yes / No | WORK ORDER NON-CONFORMANCE / UPDATE | | | |
| | | | OA Closed: | Date: | |

| Work Orde | er: | | | | DISPOSITION | | | | AGAINST DE | EPARTMENT/PROCESS | | | |
|---------------|------------|------------|------------|----------|----------------------------|---------------------|---------|-------------------|------------|-------------------|---------------|--------------------|--|
| | | · | | | Rework | 1 I | | Skid-tube | Crosstube | | Water Jet | Engineering | |
| Part N | No. | | | | Scrap | 1 | | Machining | Small Fab | Pro | d. Eng. Coor. | Quality | |
| | | | | | Use-as-is | 1 . | | noforming | Finishing | | re/Packaging | Other | |
| NCR N | No. | | | | Work Order Update | 1 | | Large Fab | Composite | , | Supplier | - | |
| | | | | | ' <u>-</u> | ' [| | · | • • | | | | |
| Root | | | | Descri | ption of work order update | lni | tial | Act | tion | Sign & | | | |
| Cause | Date | Step | Qty | | or Non-conformance | Chie | f Eng | Desci | ription | Date | Verification | QC Inspector | |
| Doc/Data | | | | | | | | | | | | | |
| Equip/Tooling | | | | | | | | | | | | | |
| Operator | | | | | | | | | | | | | |
| Material | | | | | | | | | • | | | | |
| Setup | | ١. | | | | | | | | | | | |
| Other | | ; | | | | | | | | | | | |
| Process | | | | | | | | | | | | | |
| Supplier | | | | | • | | | | | | | | |
| Training | | | | | | | | | | | | | |
| Unapproved | | | | | | | | | | | | | |
| | | | | | F | AULT | CATE | GORY | | | | | |
| Landir | ng Gear | | | | General | | | | | , | - | | |
| | Bending | | | | Bend | G | rain | | | Ovalized | | Pressure/Forced | |
| | Centre No | ot Concer | ntric to (| o/s | BOM/Route | Н | ardwa | re | | Over/Under | tolerance | Temperature/Cure | |
| | Cracks | | | | Broken/Damaged | ∐ In | specti | on Incomplete | | Part Incorred | ⊢ | Weld | |
| | Crushed/ | Crimped. | | | Burrs | - | | ions Incomplete/l | Jnclear | Part Lost/Mi | ssing | Wrong Stock Pulled | |
| | Cuffs | | | ļ | Contamination | \square^{\bowtie} | lainte | nance | | Part Moved | | | |
| 1 | Heat Trea | t | | | Countersink | Шм | lislabe | led | | Positioned V | | | |
| | Inspection | n Strip in | Tube | <u></u> | Cut Too Short | Шм | lisread | | | Power Loss/ | Surge | Other | |
| Ĺ | Ripples in | Bend | | <u> </u> | Drill Holes | \vdash | ffset | | | | | | |
| Ţ | Torque W | aves in E | xtrusior | ۱ | Drawing | | ut of C | alibration | | <u> </u> | | | |
| 1 | Turning S | equence | | | Finish | Ц٥ | ut of S | equence | | | | | |
| ŀ | Wave/Tw | ist in Tub | e | 1 | Folio | 1 0 | utside | Dimensions | | | | | |

Picklist Print

Friday, August 17, 2012 2:34:27 PM

Page 1

Work Order ID:

89021

Parent Item:

D407-667-105

Parent Item Name:

Crosstube Fwd

Start Date: 8/17/2012

Required Date: 8/24/2012

Start Oty: 1.00

Required Oty: 1.00

Comments:

IPP Rev:F 05.09.01Add holes for compatibility with Bell SkidtubesKJ/JLM

IPP Rev:G 08-05-16 chg QC6 to QC15 DD verified by:EC

IPP Rev:H 08-06-03 update as per DSI9415 (ECN1198) DD verified by:ec IPP Rev:I 08-07-14 add (scribe inside of tube) seq.6 DD verified by:EC

IPP Rev:J 08-07-28 update as per (par 08-013) DD verified by:EC

IPP Rev K 09.01.06

ECN 08-562

EC verified by:DD IPP REV:L 11.08.05 PER ECN 11-

615 DD VERF:EC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-----------------------|--------------|---------------|----------------|--------|
| D407-667-105 | | Manufactured | No | | X5314 | | Each | 0.0000 | | 1 | ۸۸ | | |
| Crosstube Fwd | | | | | 22311 | | | | S. L. Santa Sandrasen | <u> </u> | HX. | 12 - | 8-21 |

D206, 667-017 131×1 1208-27

| NCR: | Yes | / No | | | | WORK ORDER NON- | CO | NFORM | MANCE / UP | DATE | | | |
|---|----------|--|----------|------------|----------|---|-----|------------|---|-------------------------------|--|--------------------------------------|--|
| | | | | | | | | | | | QA Closed: | Date | : |
| Work Ord | ler: | | | | | DISPOSITION | | | | AGAINST DE | PARTMENT | /PROCESS | |
| Part | No. | | | | | Rework Scrap Use-as-is | | f Therm | Skid-tube Machining noforming | Crosstube Small Fab Finishing | 4 | Water Jet d. Eng. Coor. re/Packaging | Engineering Quality Other |
| NCR : | No. | | | | | Work Order Update | | | Large Fab | Composite | _ | Supplier | |
| Root | | | , | | | ption of work order update | | Initial | ļ. | tion | Sign & | | |
| Cause | | Date | Step | Qty | (| or Non-conformance | Ct | nief Eng | Desc | ription | Date | Verification | QC Inspector |
| Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved | | | | | | | | | | | | | |
| Ottapproved | | | L | i | | | ΔUI | T CATE | GORY | | | I | |
| Landi | ng G | iear | | | | General | | | | | | | |
| | | Bending Centre No Cracks Crushed/C Cuffs Heat Trea | Crimped. | ntric to (| o/s | Bend BOM/Route Broken/Damaged Burrs Contamination Countersink | | 4 ' | on Incomplete ions Incomplete/I nance | Unclear | Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned | ct | Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled |
| | - | Inspection | | Tube | <u> </u> | Cut Too Short | | Misread | | | Power Loss, | _ | Other |
| | \vdash | Ripples in | · · | | | Drill Holes | | Offset | | L | <u> </u> | ~ L | ··· |

Out of Calibration

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART SERVICE INSTRUCTION TO AMEND INSTALLATION INSTRUCTIONS IIN-D206-667 REV. D AND EARLIER AND

TO AMEND INSTALLATION INSTRUCTIONS IIN-D206-667 REV. D AND EARLIER AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D206-667 REV. 3 AND EARLIER

REF: CANADIAN STC: SH01-5 REF: FAA STC: SR01304NY REF: EASA STC: EASA.IM.R.S.01179

PURPOSE:

The purpose of this service instruction is to permanently add the D206-667-017 Kit to the DXXX-667-101/-103/-105/-107 Crosstube kits.

INSTRUCTIONS:

DXXX-667-101/-103/-105/-107 Crosstubes at CHG 005/006/005/003 (respectively) and later are supplied with the D206-667-017 Grounding Strap Kit installed per section 3.2 of IIN-D206-667 Rev. D.

WEIGHT AND BALANCE

There is a negligible weight change associated with the installation of this kit.

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-0-01

BY: D. SHEPHERD (DE # 02)

DATE: 12.08.02 CERT. NO.: SH01-5 ISSUE NO.: 3

| Α | NEW IS | SUE (REF CIF | R 12-3) | AJS | 11.08.02 |
|--------|--------|--------------|---|----------------|----------------------|
| REV. | | | DESCRIPTION | BY | DATE |
| DESIG | 1 | AJS | DART AEROSPA | CF II | ľD |
| DRAW | ٧ | AJS | HAWKESBURY, ONTARIO | | - - |
| CHECK | ED | 本 | DRAWING NO. | | REV. A |
| MFG. A | PPR. | N/A | DSI 9628 | | SHEET 1 OF 1 |
| APPRO | VED | M | TITLE | | SCALE |
| DE APP | PR. | # | GROUNDING STRAP INST | TALLA | TION NTS |
| DATE | 12.0 | 8.02 | COPYRIGHT © 2012 BY DART AS THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED OF NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICAT | ON THE EXPRESS | CONDITION THAT IT IS |

| NCR: | Yes | / No | | | | WORK ORDER NON- | COI | NFOR | MANCE / UPI | DATE | | | |
|---|-------|---|-------------------------------------|---------|--------|---|-----|--|---|---|--|--|--|
| | | | | | | | | | · · · · · · · · · · · · · · · · · · · | | QA Closed: | Date | |
| Work Ord | er: _ | | | | | DISPOSITION | 7 | | F7 | AGAINST DE | PARTMENT, | | _ |
| Part f | _ | | | | | Rework Scrap Use-as-is Work Order Update | | Thern | Skid-tube Machining noforming Large Fab | Crosstube Small Fab Finishing Composite | | Water Jet d. Eng. Coor. e/Packaging Supplier | Engineering Quality Other |
| Root | | | | | Descri | ption of work order update | | Initial | Act | ion | Sign & | | |
| Cause | | Date | Step | Qty | | or Non-conformance | Ch | nief Eng | Descr | iption | Date | Verification | QC Inspector |
| Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved | | | | | | | | | | | | | |
| Landi | na Ga | 225 | | | | General F | AUL | T CATE | GORT | | | | |
| Lanu | | Bending Centre No Cracks Crushed/O Cuffs Heat Trea Inspection | Crimped. t n Strip in Bend | Tube | | Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes | | Instruct Mainte Mislabe Misreac Offset | on Incomplete ions Incomplete/U nance iled | Inclear | Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/ | ssing Vrong | Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other |
| | Т | orque W | aves in E | xtrusio | า | Drawing | | Out of C | Calibration | | | | |

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D206-667 REV. C AND EARLIER AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D206-667 REV. 2 AND EARLIER

REF: CANADIAN STC: SH01-5 REF: FAA STC: SR01304NY REF: EASA STC: EASA.IM.R.S.01179

PURPOSE

The purpose of this service instruction is to add the optional D206-667-017 Kit and provide guidelines to install extra clamps on D206-667-101/-103 or D407-667-105 forward crosstubes to allow fastening of OEM grounding straps.

INSTRUCTIONS:

- 1) If installed, follow Section 32.1 of ICA-D206-667 for removal of the forward crosstube from the helicopter.
 2) Locate AN742D36 Clamp as shown in Figure 1 of this service instruction and mark location of clamp on the crosstube.
- 3) Remove crosstube finish (paint and primer) in area where AN742D36 Clamp will be installed and touch up affected area with chemical film material (Alodine 1200 or 1201) per MIL-C-5541.

 4) Install AN742D36 Clamp complete with MS9165-05 per Section A-A of Figure 1 of this service instruction.

 5) Touch up paint as required per Item 5.3.3 of ICA-D206-667.

 6) Seal edges where AN742D36 Clamp meets with crosstube using Sikaflex-241/291 or MIL-S-8802 Class B2 or

- Proseal 890 sealant.
- Install/re-install forward crosstube in accordance with Section 32.2 of ICA-D206-667.
- 8) Fasten OEM grounding strap to MS9165-05 Angle Bracket on forward crosstube per Bell instructions.
 9) Undertake a resistance check between a ground point on the skidtube and aircraft ground in accordance with Class R-II requirement per BHT-ELEC-SPM. Maximum resistance is 10 milliohms (mΩ).

PARTS LIST:

| QTY -017 | PART NUMBER | DESCRIPTION |
|-------------|---------------|------------------------------|
| X | D206-667-017 | GROUNDING STRAP INSTALLATION |
| 2 | AN742D36 | CLAMP |
| 2 | MS9165-05 | ANGLE BRACKET |
| 2 | MS21042-3 | NUT |
| 2 | MS27039-1-08 | SCREW |
| 4 | NAS1149C0332R | WASHER |

WEIGHT AND BALANCE

There is a negligible weight change associated with the installation of this kit.

CANADA DEPARTMENT OF TRANSPORT AIRCRAFT CERTIFICATION BRANCH DAO # 01-O-01

D. SHEPHERD (DE # 02)

DATE: CERT. NO .: SH01-5 ISSUE NO .:

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| A. | NEW ISSUE | | | MB | 11.02.18 |
| REV. | | | DESCRIPTION | BY | DATE |
| DESIG | N _ | Ы | DART AEROSPAC | E LT | .D |
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| CHECK | (ED | UP. | DRAWING NO. | | REV. A |
| MFG. A | PPR. | N/A | DSI 9544 | , | SHEET 1 OF 2 |
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| DE APP | PR. < | # | GROUNDING STRAP INSTA | LLAT | TION NTS |
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| NCR: | Yes / No | | | | WORK ORDER NON-C | O | NFORM | MANCE / UPDAT | | | | |
| ··· | | | | | | | | | | QA Closed: | Date: | |
| Work Orde | er. | | | | DISPOSITION | | | A | GAINST DEI | PARTMENT | /PROCESS | |
| WOIN OIG | | | | | Rework | 1 | | Skid-tube Cr | osstube | | Water Jet | Engineering |
| Part N | No. | | | | Scrap | | | — | mall Fab | Pro | d. Eng. Coor. | Quality |
| | | | | | Use-as-is | | | · | inishing | Rec/Stor | e/Packaging | Other |
| NCR N | No | | | | Work Order Update |] | | Large Fab Cor | mposite 🔙 | | Supplier | |
| | ···· | , | , | · | | | | | | | | |
| Root | | | | l ' | ption of work order update | | nitial | Action | | Sign & | _ | |
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| Doc/Data | | | | | | | | | | | | |
| Equip/Tooling | | | | | | | | | | | | |
| Operator | | | | | | | | | | | | |
| Material | | | | | | | | | | | | |
| Setup | | | | | | | | | | | | |
| Other | | | | | | | | | | | | |
| Process | | | | | | | | | | | | |
| Supplier | | | | | | | | | | | | |
| Training | | | | | | | | | | | | |
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| | Centre No | ot Concer | ntric to | o/s | BOM/Route | | Hardwa | re . | | Over/Under | tolerance | Temperature/Cure |
| | Cracks | | | | Broken/Damaged | Ш | Inspecti | on Incomplete | | Part Incorred | ct | Weld |
| | Crushed/ | Crimped. | | | Burrs | Ш | Instruct | ons Incomplete/Unclea | er 🔲 | Part Lost/Mi | ssing | Wrong Stock Pulled |
| | Cuffs | | | | Contamination | | Mainte | nance | | Part Moved | | · |
| | Heat Trea | it | | | Countersink | | Mislabe | led | | Positioned V | Vrong | - |
| Ī | Inspection | n Strin in | Tube | | Cut Too Short | | Misread | | | Power Loss/ | Surge | Other |

Offset

Out of Calibration
Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

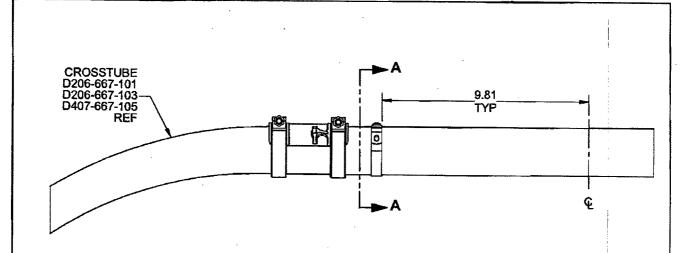
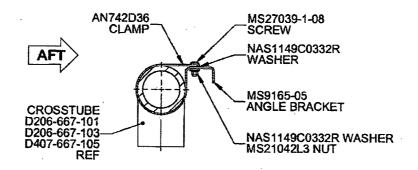


FIGURE 1 - GROUNDING STRAP INSTALLATION (VIEW LOOKING FWD)



SECTION A-A

(SUPPORT, CLAMP, CUSHION NOT SHOWN FOR CLARITY)
TYP, 2 PL PER CROSSTUBE

CANADA DEPARTMENT OF TRANSPORT AIRCRAFT CERTIFICATION BRANCH DAO # 01-O-01

D. SHEPHERD (DE # 02)

DATE: CERT. NO.: ISSUE NO.: SH01-5

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| DESIGN | AI | DART AEROSPACE LTD | |
| DRAWN | - | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | W | DRAWING NO. | REV. A |
| MFG. APPR. | N/A | DSI 9544 SHE | ET 2 OF 2 |
| APPROVED | N | TITLE | SCALE |
| DE APPR. | A | GROUNDING STRAP INSTALLATIO | N NTS |
| DATE 11.0 | 2.18 | COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS COCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONCE. NOT TO BE USED ECO ANY SIGNOSE OF COMES OF TRANSPORTED TO ANY OFFICE SPECIAL CONFIDENCE TO THE ANY OFFICE SPECIAL | |

WRITTEN PERMISSION FROM DART AEROSPACE LTD.

| | | | | | | | | | | | DQA: | Date | e: |
|-------------|------------------|--------------------------------------|------------------------------|-------------|--------------------|---------------------------------|---|---------------------------------|--------------|--|----------------------|---------------------------|--------------------|
| NCR: | Yes | / No | | | | WORK ORDER NON- | CO | NFORI | MANCE / UF | PDATE | QA Closed: | Date | e: |
| Vork Order: | | | | | | DISPOSITION | AGAINST DEPARTMENT/PROCESS | | | | | | |
| | | | | | | | | | | | | | |
| Part No. | | | | | | Rework Scrap Use-as-is | Skid-tube Crosstube Machining Small Fab Thermoforming Finishing | | | Water Jet Prod. Eng. Coor. Rec/Store/Packaging | | Engineering Quality Other | |
| NCR No. | | | | | | Work Order Update Large Fab Com | | | | Composite | | Supplier | |
| Root | | | | | Descr | iption of work order update | | Initial | A | ction | Sign & | | |
| Cause | | Date | Date Step Qty or Non-conform | | or Non-conformance | Cł | hief Eng Description | | | Date | Verification | QC Inspector | |
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| napproved | _ | <u> </u> | | | | p- | 1 | T CATE | CORV | | | <u> </u> | |
| 1 | | | | | | General | AUI | LICATE | JORY | | | | |
| | | | | | | Bend | Г | Grain | | Г | Ovalized | Г | Pressure/Forced |
| | \vdash | Bending Centre Not Concentric to O/S | | | | BOM/Route | Hardw | | are — | | Over/Under tolerance | | Temperature/Cure |
| | \vdash | Cracks | | | | Broken/Damaged | \vdash | Inspection Incomplete | | | Part Incorrect | | Weld |
| | Crushed/Crimped. | | | | - | Burrs | <u> </u> | Instructions Incomplete/Unclear | | | Part Lost/Missing | | Wrong Stock Pulled |
| | Cuffs | | | | | Contamination | \vdash | Mainte | | - | Part Moved | | |
| | \vdash | Heat Treat | | | | Countersink | | Mislabe | | ļ , | Positioned V | | |
| | | Inspection Strip in Tube | | | | Cut Too Short | \vdash | Misreac | | | Power Loss/ | | Other |
| | | Ripples in Bend | | | | Drill Holes | | Offset | | | | _ | • |
| | | Torque Waves in Extrusion | | | | Drawing | | Out of Calibration | | | | | |
| | | Turning Se | | | | Finish | | Out of Sequence | | | | | |

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Wave/Twist in Tube